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ABSTRACT

This report describes Project THISTLE: Thinking Skills in Teaching and Learning, a collaborative college-school program developed by Montclair State College and the Newark public schools, New Jersey. It was designed to improve the basic skills of college bound urban high school students working with their teachers in an integrated process of curriculum and staff development. Its major emphasis is on the preparation of classroom teachers to strengthen the critical thinking abilities of their students, helping them develop the skills and dispositions to engage in intellectually active, constructive, and reflective encounters with ideas within the content areas. It was first implemented in 1979 and has been in continuous operation since then, involving more than 300 Newark teachers. The basic structure of the project involves Newark teachers in three overlapping but sequential curriculum/staff development phases: (1) graduate course work to improve their own understanding of the learning process; (2) additional related coursework; and (3) extended professional development activities. Studies and evaluations of this project show that it has been effective in improving student abilities in reading comprehension. There has been continuing interest in the program by Newark and its teachers. Copies of Project THISTLE newsletters are appended along with copies of related journal articles. Contains 24 references. (SM)

**Project THISTLE: Thinking Skills in Teaching and Learning
A Review of a Nine-Year College-School Collaboration Program**

**Wendy Oxman, Professor of Education and
Director, Institute for Critical Thinking**

and

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February, 1989

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Project THISTLE is a college school collaboration program designed to improve the pre-college preparation of urban students. The support of the the Victoria Foundation, the Prudential Foundation, Fund for New Jersey, the Jessie Smith Noyes Foundation, the New Jersey Board of Higher Education, and Montclair State College are gratefully acknowledged. This review was prepared for the AASCU/ERIC Model Programs Inventory Project.

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AASCU/ERIC Model Programs Inventory Project

The AASCU/ERIC Model Programs Inventory is a two-year project seeking to establish and test a model system for collecting and disseminating information on model programs at AASCU-member institutions--375 of the public four-year colleges and universities in the United States.

The four objectives of the project are:

- o To increase the information on model programs available to all institutions through the ERIC system
- o To encourage the use of the ERIC system by AASCU institutions
- o To improve AASCU's ability to know about, and share information on, activities at member institutions, and
- o To test a model for collaboration with ERIC that other national organizations might adopt.

The AASCU/ERIC Model Programs inventory Project is funded with a grant from the Fund for the Improvement of Postsecondary Education to the American Association of State Colleges and Universities, in collaboration with the ERIC Clearinghouse on Higher Education at The George Washington University.

Project THISTLE: Thinking Skills in Teaching and Learning

**Wendy Oxman and Nicholas M. Michelli
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February, 1989

Abstract

Project THISTLE: Thinking Skills in Teaching and Learning is a collaborative college-school program developed by Montclair State College and the Newark public schools. It was initially implemented in 1979, and has been in continuous operation since that time, involving more than 300 Newark teachers to date. Project THISTLE was designed to improve the basic skills of college bound urban high school students by working with their teachers in an integrated process of curriculum and staff development. The major emphasis of Project THISTLE is on the preparation of classroom teachers to strengthen the critical thinking abilities of their students, helping them to develop the skills and dispositions to engage in intellectually active, constructive, and reflective encounters with ideas within the content areas.

Project THISTLE is described as a college-school collaborative project and as a pre-college preparation program in critical, or reflective, thinking which defines aspects of the basic skills as higher order thinking skills within content instruction, and which integrates curriculum and staff development processes. References are made to a series of publications for and about Project THISTLE, many of which are included as appendices to this summary review paper.

Project THISTLE: Thinking Skills in Teaching and Learning

Wendy Oxman and Nicholas M. Michelli
Montclair State College

February, 1989

Project THISTLE: Thinking Skills in Teaching and Learning was designed to improve the basic skills of college bound urban high school students by working with their teachers in an integrated process of curriculum and staff development. The major emphasis of Project THISTLE is on the preparation of classroom teachers to strengthen the critical thinking abilities of their students, helping them to develop the skills and dispositions to engage in intellectually active, constructive, and reflective encounters with ideas within the content areas. Project THISTLE is a collaborative college-school program developed by Montclair State College and the Newark public schools. It was initially implemented in 1979, and has been in continuous operation since that time.

In this review paper, Project THISTLE will be described as a college-school collaborative project, for which it was nominated for the G. Theodore Mitau Award for Innovation and Change in Higher Education by the American Association of State Colleges and Universities. It will also be described as a pre-college preparation program in critical, or reflective, thinking which defines aspects of the basic skills as higher order thinking skills within content instruction, and which integrates the curriculum and staff development processes. References will be made to a series of publications for and about Project THISTLE, many of which have been included as appendices to this summary review paper.

Background

Planned as a cooperative higher education/local education agency venture involving Montclair State College and the Newark, New Jersey Public Schools, Project THISTLE was initially funded by the New Jersey Department of Higher Education, in the interest of reducing the need, at the college level, for remedial support of poorly prepared entering students. Conceptualizing high school level basic skills as thinking skills, and working with secondary teachers to strengthen the teaching of thinking across the content areas, Project THISTLE has been operating since 1980, with funding provided by several private foundations, including the Victoria and Prudential Foundations, as well as by the Department of Higher Education and Montclair State College. The most recent group of Newark teachers enrolled in January, 1989.

Description

The basic structure of Project THISTLE involves Newark teachers in three overlapping but sequential curriculum/staff development phases. During Phase I, teachers engage in graduate course work designed to improve their own understanding of the learning process and their abilities to develop curriculum--not new content outlines nor new lists of suggested activities, but more complete, more thoughtful, more consistent, "remodeled" (Paul, 1986, 1987) versions of their own curricular plans, with explicit attention to the development of critical thinking. Phase II involves additional related coursework, classroom implementation during which the participating teachers put these remodeled plans into effect with their students, with the help and support of college faculty, and Phase III engages participants in extended professional development activities which depend upon personal and professional interests, needs, strengths, and preferences. Throughout all aspects of the program, consistent emphasis is placed on skills in planning and in teaching for thinking.

Teachers who complete the entire project receive a total of 18 graduate credits, applicable, if other standards are met, to a master's degree program. More than 300 Newark teachers have participated in the project over the past decade. A number of Project THISTLE teachers who have completed their master's degrees have become department chairs, assistant principals, and other administrators within the Newark school system. At present, approximately 10 Montclair State College faculty and 60 Newark teachers are actively engaged in the project.

The basic format of the program has changed little over the years, although several sub-projects have been added to follow up on teachers' requests for opportunities for service and for further professional growth, and elementary teachers have been included in the Project. A newsletter, *The Thistler* (see Appendix), has been published regularly. A simulation game, "The THORP Game" (Oxman, 1983) was produced to introduce the concepts underlying Project THISTLE (reviewed by Erickson, 1984). Former participants have been involved in team teaching of graduate courses, and in presenting the work of the project at national conferences, such as at ASCD in New York in 1982.

Project THISTLE as a College/School Collaboration Project

Prior to introducing the program to Newark school personnel, explicit consideration was given to models of the educational change process, and specific change strategies were adopted. These strategies included securing and maintaining the cooperation of administrators and supervisors, avoiding domination of the program by college faculty, implementing extensive follow-up activities, and providing professional and personal incentives. In planning strategies to assure program success, attention was given to the concepts of relative advantage, compatibility, and divisibility (Oxman & Michelli, 1982).

Project THISTLE has provided the opportunity for faculty at Montclair State College to further their professional growth as well. Research studies have been completed (Oxman & Barell, 1983), and a collaboratively planned and executed sub-project on metaphoric thinking was implemented (Barell & Oxman, 1984). The Montclair Education Review, a journal sponsored by the School of Professional Studies at Montclair State College to articulate the problems and concerns of educators in Northern New Jersey, published special issues on positive aspects of the Newark schools (Michelli, 1980), and on developing thinking in the schools (Oxman & Uhia, 1982). A three-issue series of the Montclair Education Review was also devoted to a consideration of the problems of pre-college preparation, with Project THISTLE as the context (Oxman & Barell, 1981 a,b; 1982). Currently, an annotated anthology of readings is in preparation (Oxman & Michelli, 1989).

The simulation game "The THORP Game," developed to introduce some of the principles behind Project THISTLE (Oxman, 1983; Erickson, 1984) has provided further professional opportunities for Montclair State College faculty. THORP illustrates the principle that, given the same material resources, schools prepare children differentially for positions in society. Debriefing discussion following this participative activity involves critical reflection on the nature of traditional schooling and the extent to which assumptions about education and society, and about particular groups of children, determine the extent to which thinking abilities are fostered.

In recent years, Project THISTLE has become a project "associated with" the Institute for Critical Thinking at Montclair State College (Philosophy for Children, under the direction of Matthew Lipman, is another such project), and has contributed to, and benefitted from its association with leading members of the national critical thinking movement, including Matthew Lipman, Mark Weinstein, who currently teaches in the project, and Richard Paul. Workshop presentations have been made about Project THISTLE and the issues addressed by this project at the national conference on Critical Thinking and Educational Reform at Sonoma State University, in California (Oxman, 1988), at the Conference on Critical Thinking at Newport News, Va. (Oxman & Michelli, 1988), and at the annual meeting of the Northeastern Educational Research Association (Oxman, Michelli & Weinstein, 1988). Most recently, a series of essays about 17 of the participating teachers entitled *Urban Classroom Portraits: Teachers Who Make a Difference* has been published in book form (Bredemeier, 1988).

Project THISTLE as a Pre-College Preparation Program

Thinking and Basic Skills. Underlying Project THISTLE is the belief that thinking skills are critical components of both the basic skills involved in reading comprehension, analytic writing and mathematical problem solving, as well as successful classroom performance. Thus, it was anticipated that improvement in thinking skills, defined, in part, as higher-order basic skills, would be reflected in improved performance on both

traditional standardized tests of basic skills and in classroom activities. (Oxman, 1984). A series of studies of student test performance have indicated that the project was effective in improving student abilities in reading comprehension. The reading comprehension subtest of the regular standardized reading test given in the Newark public schools was used as an indicator of achievement in thinking, defined in terms of higher order basic skills. As noted in Oxman, (1984):

How do thinking and the basic skills relate to each other? A basic skill may be thought of as any skill that is a prerequisite for learning or for life, although we typically associate the term with primary education. In the earliest grades, almost all children master the association between letters and sounds, numbers and quantities, and learn to represent the symbols of language and mathematics on paper. They learn, too, to string together letters to make words, and to string together words into sentences. They learn to combine and to separate quantities. However, reading, writing and arithmetic involve far more than these basic elements, which mainly deal with symbolic representation of concrete experience. Beyond these elements and yet well within the "three R's lie thinking and learning. The very narrow, traditional view of the basic skills must be exchanged for a definition which recognizes the need for the students' intellectually active involvement in searching for meaning. Through reading, through listening to and interacting with one's teacher and classmates, through oral and written expression, students, if they are encouraged to do so, construct, reconstruct and integrate new information and ideas. This process is thinking.

Integrating Curriculum and Staff Development. Project THISTLE synthesizes the two processes of curriculum and staff development, and cuts across disciplines to focus on the improvement of thinking as an essential, integral part of both subject area learning and basic skills development.

The emphasis of Project THISTLE is on planning, by content area teachers, for instruction that encourages the development of thinking. Project THISTLE, then, is an "integrated curriculum and staff development program" as it provides teachers with guided instruction by college faculty in the use of curriculum resources in the planning process as well as instruction in the nature of thinking and learning, and guidance in the skillful orchestration of a wide range of resources--materials, strategies, activities, content, and evaluation techniques--to improve thinking skills. Assistance in developing improved skills in leading discussions, in effective questioning and inquiry techniques, and in the creation of assignments that involve complex individual and small group student work as well as conventional classroom practices, are provided, as is support in overcoming the inevitable student resistance to the imposition of higher standards and expectations is also of great value to teachers.

According to Newmann (1988), there is a commonsense difference between higher order and lower order thinking. It is suggested in the contrast between ideals for schools and the reality reported in numerous classroom observations. Most students are rarely challenged to use their minds...Higher order thinking signifies challenge and expanded use of the mind; lower order thinking signifies routine, mechanistic application and

constraints on the mind." Typically, students do very little higher order thinking in classrooms at any level of education (Goodlad, 1983), and least of all in classrooms in which narrowly defined approaches to basic skills or to content teaching is emphasized.

Few high school teachers have had training in curriculum development, and curriculum is typically viewed as content to be covered. However, the planning that good teachers must do is by its very nature curriculum development. Curriculum guides, textbooks, and other materials can do no more than provide parameters, suggestions, and content information for teachers' planning. Teachers need greater understanding of, and skill in, the planning/curriculum development process, in order to develop more effective plans that focus on thinking and to carry out the intentions of those curricula in their classrooms.

Most teachers have far more autonomy for curriculum planning than they realize, and many conceptualize their teaching roles as the conventional, restricted one of "content dispenser." In this restricted view of teaching and learning, the student's academic task is to remember what was said by the teacher and the textbook have said, and how to do routine procedures. Curricular planning improves when teachers reconceptualize their own roles as designer of a wide variety of complex "academic tasks" for students to complete, and in which their own role becomes that of "coach."

The nature of the academic tasks that teachers design for students to accomplish seems to be the key to understanding how conventional teaching differs from teaching for thinking. Doyle's (1983) conception of "academic work" is useful in understanding the way in which academic tasks vary in their intellectual demands and require different strategies for getting them done. For instance, students expecting to be evaluated on their ability to memorize a list of concepts, definitions, and simple associations have different work to do than students who have to explain why one of the concepts on the list is applicable in a given situation and not in another, or students who must generate principles for organizing and applying that same set of concepts. Students expecting to be evaluated on their ability to use a routine procedure have different work to do than those who expect to have to explain why the procedure works or decide when to use it. Students assuming they must work alone fail to learn to use the knowledge and talents of others; those who are set to work at a group task learn from their peers.

Summary

Project THISTLE: Thinking Skills in Teaching and Learning is a collaborative college-school program developed by Montclair State College and the Newark public schools. It was initially implemented in 1979, and has been in continuous operation since that time, involving more than 300 Newark teachers to date. Project THISTLE was designed to improve the basic skills of college bound urban high school students by working with

their teachers in an integrated process of curriculum and staff development. The major emphasis of Project THISTLE is on the preparation of classroom teachers to strengthen the critical thinking abilities of their students helping them to develop the skills and dispositions to engage in intellectually active, constructive, and reflective encounters with ideas within the content areas.

Results

A series of comprehensive program evaluations of Project THISTLE: Thinking Skills in Teaching and Learning, involving observations, interviews, questionnaire and test data analysis have been conducted over the years by outside consultants as well as MSC faculty in collaboration with Newark teachers. Studies of student test performance (e.g. Oxman, 1984) have indicated that the project was effective in improving student abilities in reading comprehension. (The reading comprehension subtest of the regular standardized reading test given in the Newark public schools was used as an indicator of achievement in thinking, defined in terms of higher order basic skills).

Most telling, perhaps, has been the continuing interest of Newark and its teachers in the program. In recent years, more teachers have to be turned away than can be accommodated by the program, and a long waiting list is maintained. Staff members of our funding agencies, active in supporting a number of special projects in Newark have even reported to us participants' enthusiasm.

Conclusions and Recommendations

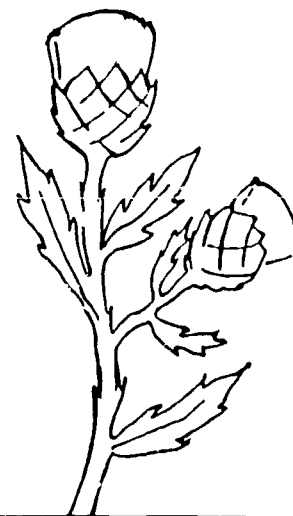
Project THISTLE, in its effective involvement with Newark teachers, and in its long term and cumulative effects within the Newark schools, is a successful college-urban school collaborative program. Project THISTLE might be replicated by other colleges and universities in conjunction with other urban districts, although a significant, long-term commitment would be recommended, with time for preparation and collaborative planning. The idea of conceptualizing basic skills at the high school level as thinking skills was highly innovative at the time Project THISTLE began, in 1980. Providing in-depth instruction to teachers in the curriculum development process was atypical as well. With the current national interest in critical thinking and educational reform, there might well be even greater receptivity to such a program than the warm welcome we have enjoyed in the Newark schools.

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The Thistler



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FALL, 1988

MONTCLAIR STATE COLLEGE
UPPER MONTCLAIR, NJ 07043

Newsletter of Project THISTLE: Thinking Skills in Teaching and Learning

New MSC Location: Life Hall, Rm. 224 Secretary, Linda Christy Telephone 893-5184

We are happy to welcome you back to Project THISTLE: Thinking Skills in Teaching and Learning, and to let you know about some recent changes. We have a new, very capable secretary, Linda Christy, who will be working just with us, daily from 8:30 to 12:30, the first time we won't have to "share" a secretary! We are moving the campus location of Project THISTLE (that is, Linda and the books and files will move) to the offices of the Institute for Critical Thinking. That way, I will be able to coordinate Project THISTLE again, with Linda's help. Joy Stone, who has taken on the responsibility of chairing the new department of Reading and Educational Media at MSC will no longer be able to serve as Project Coordinator. Joy wishes everyone in Project THISTLE well. Her last "Coordinator's Column," written in June, is on Page 7 of this issue.

Wendy Oxman, Director, Project THISTLE

IN THIS ISSUE

Nancy Tumposky, Guest Editor

This issue of THE THISTLER is a thematic one. The theme is the meaning and impact of E.D. Hirsch's book *Cultural Literacy: What Every American Needs to Know* (1987, Boston: Houghton Mifflin Company), and the relationship of Hirsch's thesis to the philosophy of Project THISTLE: Thinking Skills in Teaching and Learning.

Several of the contributions to this issue derive from discussions which emerged in two sections of a THISTLE course, "Research Seminar in Curriculum Construction", taught during the Fall 1987 semester by Drs. John Palladino and Nancy Tumposky. Palladino, Tumposky, and their students comment here on the validity of Hirsch's statements, their possible relevance for Newark school teachers, and the extent to which Hirsch and THISTLE are in agreement about the causes of, and the solutions for, problems in American schools today.

A section of the Appendix of Hirsch's book has been reproduced here for those who have not yet come face to face with "the list".

Other articles by MSC faculty include reflections by THISTLERMorton Rich ("Writing and Personal Growth"), and a tentative explanation by Tom Benediktsson ("Canons to the Right") of the popularity of Hirsch's book, and of its oft-linked companion, *The Closing of the American Mind* by Allan Bloom. Rich and Benediktsson are both members of the English Department. Wendy Oxman has contributed a discussion of the value of Hirsch's work as it deals with the content and process dichotomy in education ("Federal Aid to Education and Cultural Literacy").

Finally, *The New York Times* has granted us permission to reproduce a provocative and tantalizing Op-Ed essay from December 1987, "What Do 47 Year Olds Know?", by Benjamin Barber, a professor of political science at Rutgers University. Barber's thesis, that our 17 year olds are ALREADY culturally literate, is sure to raise many eyebrows, and in the spirit of THISTLE, start us all thinking!

We welcome your comments and reactions to this issue and look forward to printing your responses in the next issue.

WHAT EVERY AMERICAN NEEDS TO KNOW

Nancy Tumposky, Ed.D.

The joke goes:

Man and woman, emerging from the subway at Yankee Stadium:

Man: Well, here we are — the house that Ruth built!

Woman: Ruth who?

If you think it's funny, that's because you know that Babe Ruth was a famous baseball player and that it was he that the man in the joke was referring to, not a woman named Ruth, even though Ruth is usually a first name for a woman, not a last name for a man. You have the background information to make sense of the words, the meaning of which goes deeper than their actual surface structure.

I got the joke, even though I don't know much about baseball. That makes me, in Hirsch's terms, "culturally literate", though I'd be hard pressed to tell you much more about Babe Ruth other than that he was a good hitter.

What about this information that he claims we "need to know"? How much of it do we need? How does Hirsch know we'll need it? And doesn't it keep changing all the time anyway? If there's anything that we "know" in the last half of the 20th century, it's that we don't know what it is that we'll really need to know! The argument now tends to get a bit circular, like a Mobius strip. (Did you "know" "Mobius strip"? You would have if you were a math major. I didn't know it until last year. Maybe I was culturally illiterate until then.)

After a semester of debating with my class, after reading Hirsch's book twice, Bloom's book once, and countless newspaper and magazine articles, I'm still ambivalent about Hirsch's thesis. I like his chapter on schema theory, and the importance it placed on the role of pre-existing information for creating meaning. I hated the section on national culture and on bilingualism. I thought his treatment of Dewey and Rousseau was superficial and missed the point. He skirts the issue of "Whose list is it anyway?" But in the end, I have to say, he started everybody talking, and thinking, about an important topic, and he put "content" back on the table, for us to dissect it, critically and reflectively.

P.S. Mobius Strip is not on the list. ☐

MSC RESPONDS TO BLOOM: "CLOSING"? NO! "OPENING!"

"Although Montclair State College is no longer exclusively a teacher's college, it remains a college whose faculty continue to care deeply about teaching" remarks Gregory Waters, Associate Vice President for Academic Affairs, in the Preface of *Opening the American Mind: Reflections Upon Teaching Thinking in Higher Education*. Upper Montclair, NJ: Montclair State College, 1988, edited by John Barell.

Nowhere is this concern more evident than in the voices of the faculty themselves as they discuss, in this volume, what it means to think in their particular disciplines, and what they do in the classroom to try to encourage what they define as "good thinking." The reflections of these mathematicians, historians, philosophers and others centers around certain questions:

1. What is the nature of good teaching?
2. What makes you an effective teacher?
3. What is thinking in your discipline?
4. How do you challenge students to think in your discipline?
5. What can the college do to enhance students' thinking processes?

Participants in Project THISTLE: Thinking Skills in Teaching and Learning who are interested in further information about this book should contact: John Barell, Chapin Hall, Montclair State College, Upper Montclair, New Jersey 07043.

MONTCLAIR STATE COLLEGE
SCHOOL OF PROFESSIONAL STUDIES
Nicholas M. Michelli, *Dean*

PROJECT THISTLE: THINKING SKILLS
IN TEACHING AND LEARNING
Wendy Oxman, *Director*
Linda Christy, *Secretary*

The Thistler, Fall 1988 Issue
Nancy Tumposky, *Guest Editor*

We welcome your comments, suggestions, and offers of assistance. Please send them to:
Project THISTLE, Montclair State College,
Upper Montclair, NJ 07043

893-5184

WHAT DO 47-YEAR-OLDS KNOW?

Benjamin Barber, Rutgers University

(Reprinted with permission of Benjamin Barber and THE NEW YORK TIMES)

We have heard a great deal about what our 17-year-olds do and don't know. About half don't know much of anything, according to Diane Ravitch and Chester E. Finn, Jr., who authored the book "What Do Our Seventeen Year Olds Know?"

We have also been lectured by E.D. Hirsch Jr. about the decline of "cultural literacy" - the common vocabulary once provided by Homer, Shakespeare, the Bible, etc. - and by Allan Bloom about how post-Nietzschean nihilists and weak-willed college administrators have conspired with know-nothing kids to close the American mind.

Who is to blame for this alarming illiteracy? The culprit fashionable among conservatives like Secretary of Education William J. Bennett is progressive education and all those teachers of the 60's who value skills over substance, participation in learning over authority, creativity over memorization, social justice over high standards and relevance over the timeless classics.

With the complicity of the kids themselves, these dewey-eyed liberals are charged with creating a generation of cultural morons.

But there is ample evidence to suggest that the kids are smart, not stupid - smarter than we give them credit for. They are society-smart. They are adept readers - but not of books. What they read so acutely are the social signals that emanate from the world in which they will have to make a living. Their teachers in the world - the nation's true pedagogues - are television, advertising, movies, politics and the celebrity domains they define.

What our 17-year-olds know is exactly what our 47-year olds know and, by their example, teach them. Thus the test we need to administer to find out whether the young are good learners is a test of what our 47-year olds know and are teaching. To ask who wrote "The Iliad" or what the dates of the French Revolution were or the identity of the philosopher David Hume is beside the point. Rather, we should ask What do our 47-year-olds know? This is a multiple-choice quiz.

1. One-third of Yale's 1985 graduating class applied for positions as (a) kindergarten teachers; (b) citizen soldiers in the volunteer Army; (c) doctoral students in philosophy; (d) trainees at the First Boston Corporation?

2. The signals coming from TV and magazine advertising teach you that happiness depends on: (a) the car you drive; (b) the clothes you wear; (c) the income you earn; (d) the way you smell; (e) the books you read?

3. The American most likely to have recently read "The Iliad" is: (a) a member of Congress; (b) an arbitrator; (c) a real estate developer; (d) a cosmetic surgeon; (e) one of those illiterate students who can't read or write?

4. The Reagan Administration has worked to get Government off the backs of the

EXCERPT FROM "THE LIST"

E.D. Hirsch, Jr.

Sheba, Queen of
Shelley, Percy Bysshe
Shenandoah Valley
Sherlock Holmes
Sherman's march to the
sea
Sherwood Forest
shibboleth
shipshape
ships that pass in the
night
shock therapy
short circuit
short story
shout fire in a crowded
theater
show must go on, The
Shreveport, Louisiana
Snylock
Siberia
sic
Sicily
sickle cell anemia
sic transit gloria mundi

people through deregulation and privatization in order to: (a) unleash business; (b) encourage market competition; (c) increase productivity; (d) foster trickle-down prosperity by helping the rich to get richer; (e) give the young plenty of private space in which to paint, sculpt and read the classics?

5. To be hired by a top corporation, the most important credential is: (a) a doctorate of divinity from Harvard; (b) an honors degree in classics from Oxford; (c) a Yale Younger Poets award; (d) a comparative literature degree from the Sorbonne; (e) an M.B.A. from just about anywhere?

6. If you were running for President, you would devote many hours of study to: (a) the Bible; (b) Shakespeare's plays; (c) "The Federalist Papers"; (d) Plutarch's "Lives of the Romans"; (e) "How to Master Television Makeup"?

7. To sell a screen play to Hollywood you should: (a) adapt a play by Ibsen; (b) retell the story of Jean-Jacques Rousseau's dramatic encounter with David Hume; (c) dramatize "The Aeneid," paying careful attention to its poetic cadences; (d) novelize the life story of Donald Trump, paying careful attention to fiscal cadences?

FEDERAL AID TO EDUCATION
AND
CULTURAL LITERACY

CANONS TO THE RIGHT

Wendy Orman, Ph.D.

Tom Benediktsson, Ph.D.

As a child, I watched my parents work, through the political process, toward provisions for federal aid to education. In fact, this effort dominated my childhood; my folks were always running out to one meeting or another having to do with this issue. Of course, there were critics of federal aid to education; they were "the bad guys"—people concerned about restrictions, impositions, mandates from an impersonal, remote national authority. Education, they believed, is a local concern—leave the Feds out of it. Of course, I disagreed, as did most of the adults in the liberal community in which I was raised. The rights of localities to determine educational programs seemed to be part of the movement for states' rights—a way of limiting the educational opportunities for children in relatively poor states, especially black children. The critics were racists and reactionaries, I believed; they didn't want the status quo to change and didn't want to share what they have achieved with others.

When, much later, with the Educational and Secondary Act (ESEA) of 1965, federal aid to education in the form of funds for Title I and other "Title" programs was granted, many of us in education rejoiced that a battle had been won. Finally there would be funds available to support the many innovative ideas that had languished for lack of resources. Finally, there would be funds to help underachieving students so that they would not have to leave school without the educational background increasingly needed even for minimal employment. My own doctoral work, in fact, was supported by ESEA Title IV, which, in existence only briefly, paid for graduate work for training in educational evaluation (statistics, measurement, and other "fascinating" subjects) to train people to provide technical assistance to school districts in designing and improving the innovative programs that were started under ESEA. I did that work for a number of years. It was exciting to be a part of such a valuable endeavor—I have never been able to think of a more important effort. In fact, not long ago, when Nick and I were in Austin, Texas, we made a special "pilgrimage" to the small schoolhouse, now designated as a national monument, where President Lyndon B. Johnson signed the bill that put ESEA into effect. Thank you, President Johnson, for federal aid to education!

Now, more than 20 years after that bill was signed, it seems that, unfortunately, some of the predictions of the critics came true. Once the Feds start meddling in local school affairs, education will suffer, they had said, even if they work well at first. Programs of great promise were started through the dreams, interests, abilities and hard

A recent New Yorker cartoon portrays a bookseller talking to a customer about Allan Bloom's *The Closing of the American Mind*: "I haven't read it, but it's excellent." Actually, by now nearly everybody who is going to has read Bloom's book—and its companion on the best-seller list, E.D. Hirsch's *Cultural Literacy*—and even those who haven't read them are mightily impressed. From *Why Johnny Can't Read* on, it seems that every few years, educational reform sells.

But why, of all the books on education published this year, should these two be best-sellers? What does their popularity tell us about the public mood?

A quick survey of the opening section of Bloom's book would lead us to speculate that the public mood is reactionary. Bloom's indictment of the "soul" of young America is written to please the educational right wing. Somewhere in the 1960's, he asserts, American higher education—and American society—went wrong. The pervasive ethic of relativism destroyed the very basis of ethics. The pursuit of cultural "openness" led only to ignorance and paradoxically to provincialism—a closed American mind.

In the process of establishing this argument Bloom fires salvos at various contemporary targets. Feminism is not only "the latest enemy of the vitality of classic texts," it has permanently altered the meaning of sexual love by eliminating feminine modesty. On affirmative action: "the university degree of a black student is tainted, and employers ... become guilty accomplices in the toleration of incompetence." On popular music: "life is made into a nonstop commercial prepackaged masturbational fantasy."

These indictments hardly seem the judgements of an open mind, and they are not the core of Bloom's book: but they may well be the source of its appeal. The more erudite but no less eccentric review of political philosophy that comprises Bloom's major argument is not what placed it on the best-seller list.

According to James Buchanan in *The Chronicle of Higher Education*, Bloom is a foundationalist, an educator who holds that "if we are to preserve culture, community and values, we need foundations—a set of beliefs, practices and texts—to build on." Bloom's foundations would include religious belief, a reverence for the Constitution, and a basic knowledge of the canonical texts of our civilization, the Great Books. Though he presents no specific program for educational reform, cultural absolutes and

Continued on Page 7

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THISTLE PARTICIPANTS VOICE THEIR VIEWS

Nancy Tumpolsky's section of "Research Seminar in Curriculum Construction" (Fall 1987) spent the better part of a semester reading and analyzing *Cultural Literacy* by E.D. Hirsch, Jr. Many THISTLE participants were struck by Hirsch's claim that

"There is no insurmountable reason why those who advocate the teaching of higher order skills and those who advocate the teaching of common traditional content should not join forces" (Hirsch 1987:133)

Perplexed by this apparent "smoothing over" of differences between a content based position and an approach with an emphasis on process, several THISTLERS chose to write papers addressing the following question: "To what extent is Hirsch's argument in agreement with the philosophy of the THISTLE program?" Below, we reproduce some of their reflections.

"Hirsch places the entire blame for the current state of a decrease in cultural literacy on Dewey, Rousseau, and the developmentalists. He believes that it was their unjustified emphasis on the child that brought about the present fragmented curriculum. To the contrary, the THISTLE staff communicates that an emphasis on the child is not bad, but necessary" (Deborah Bredahl, Mount Pleasant Annex School).

"Dr. Hirsch and THISTLE strongly disagree regarding the memorization of facts. THISTLE believes that the curriculum must serve as a vehicle for the development of critical thinking. Students must learn to pose questions rather than memorize facts. They should be given the opportunity to organize and rearrange information. Students should also be taught to critically analyze stated facts and formulate their own conclusions.

Dr. Hirsch states, 'Our current distaste for memorization is more pious than realistic.' He claims that children have a desire and an urge to memorize facts. Children need to be taught facts at an early age to learn the traditions of their culture and feel the comfort of their culture. This theory according to Dr. Hirsch is the way to achieve a literate society" (Elizabeth Sellitto, Abington Avenue School).

"Higher order skills and traditional content can work together toward the goal of establishing cultural literacy.

I believe that the philosophy of THISTLE is basically in accord with this premise, for despite its primary focus on thinking skills, the Project does encourage the use of content material as the vehicle for their development. . . .

Hirsch is not proposing an academic police state in which teachers function as robots reciting programmed scripts! His concern with uniformity, in fact, relates to the need for at least a superficial exposure to those pieces of information which have been targeted for inclusion in the

index of cultural literacy. The importance of familiarity with these items is underscored in Hirsch's discussion of the learning model, and schema" (Mary Ellen Chaplin, Broadway Junior High School).

Far from resolving the dilemma, we nonetheless were able to explore the value of Hirsch's statements in a spirited and challenging way which permitted all the participants an opportunity for reflective thinking of the type we all hope to then carry into the classroom. In Dewey's terms, we encountered doubt and puzzlement, and then, tolerating ambiguity, worked our ways through various hypotheses. □

WRITING AND PERSONAL GROWTH

Morton D. Rich, Ph.D.

"Teaching Writing," a graduate course offered by the English Department at MSC, is designed to help teachers improve writing instruction in their classrooms, regardless of their disciplines or grade level taught. The course has evolved along with my professional development and through my responses to the needs of the teachers enrolled. At first, these teachers were secondary teachers of English; some taught both English and reading. More recently, the enrolled teachers represented all subjects, including health and physical education.

The arrival of teachers of subjects other than English was a welcome challenge. Together we invented instructional strategies and assignments to help them, in turn, develop classroom procedures and assignments for their students. All of us experienced considerable satisfaction as we heard about and tried new kinds of assignments in classrooms from chemistry to art. Students in Newark responded eagerly to the variety of activity that writing assignments offered in courses where writing previously did not exist or had only a minor role. Learning through writing became part of their daily experience.

Three years ago, teachers from middle schools enrolled, soon followed by their colleagues from the elementary schools. so I found myself working with an area that seemed new to me: teaching writing to children in grades one through six.

I write "seemed" because the year before, the Academic Foundations Program at MSC, a program for the gifted and talented, had asked me to teach creative writing on weekends to children in grades 4 - 6. In that setting, I invented many assignments that proved stimulating to my students and was pleased with the results. so when the teachers of younger children enrolled in "Teaching Writing," I had already taught about fifty subteens, not all of them gifted. What they taught me about themselves and their age group, provided a basis for my work with teachers instructing children of all abilities.

Continued on Page 8

work of people working in schools — Homework Helper programs and classroom-based enrichment and remediation programs were, according to the evaluation results, always among the most effective. Within a few years, however, requirements were imposed on these programs so that federal aid to education was available only for specific types of programs; in order to get the money, a district had to restrict their efforts to the approved types of programs, which increasingly, were limited to certain types of pull-out remedial reading and mathematics programs using certain types of approaches, materials and equipment. Restrictions, impositions, mandates from an impersonal authority had arrived. To some extent, the critics of federal aid to education were right. Although many youngsters have benefited from these pull-out programs, I believe there was, over all, a devastating effect on education. The emphasis on pull-out remedial laboratories rather than classroom based programs, and the concentration on lower-level basic reading and mathematics objectives in those laboratories has resulted, in many schools, in a fragmentation of the school day and of the school curriculum. It has also left us with a way of thinking about curriculum and teaching that emphasizes lower level routines, and that ignore both higher order processes, such as critical thinking, and organized curricular content, such as science and social studies.

Here is where I believe E.D. Hirsch's *Cultural Literacy* is extremely timely and important. Over the years, the balance of content and process has been a fundamental task of American education. Hirsch is, in my mind, entirely correct in his assessment that content-based instruction is necessary — that processes cannot be taught save at the lowest levels of basic skills without meaningful content. To be meaningful, content must be embedded within a rich network of associations with other content, and thus, well-organized, classroom based, unit work—work extended over a period of time—in the content areas must be reinstated in elementary schools.

To prepare students for participation in a national community, as E.D. Hirsch states, is to teach them the shared history, geography, literature and art of that community. At the same time, students need to learn, along with the content, higher order processes in order to comprehend and integrate the content knowledge they acquire—it can't be done by memorizing lists of words.

We can argue with Hirsch regarding elements of his particular list—and those of any other list that is proposed. I agree with his basic premise that there is a generally

COORDINATOR'S CORNER

As I write this column, on a very warm June afternoon, I am aware that summer vacation time is practically here. The last grade sheets have been submitted to the registrar, students have come by to pick up papers and other projects, and the last department meeting of the academic year has been attended.

The different pace and atmosphere that exists at school for this short time is welcome. Its time to put away lesson plans, interesting articles clipped from newspapers and to make some notes and plans for next term. Its also a time when we can take a few minutes to think about ourselves as teachers.

Why do we teach? In *Essays on Teaching and Research*, Anya Peterson Royce, professor of anthropology at Indiana University, said: "We are constantly challenged and stimulated by our interaction with students. Students ask questions you do not think to ask. Students challenge assumptions you have not questioned. Students force you to be clear in your thinking, explanations and writing. It is only when you have to articulate (what you know) for someone who is not an expert that it becomes part of your consciousness."

These comments point to the unique opportunities for the interaction of ideas that exist between teachers and students. I believe that interaction is one of the pleasures of teaching we all cherish.

We've had several opportunities to interact with interesting "ideas" during the past year. Many of us participated in the Critical Thinking Symposium on campus and were able to react to the thoughts of Richard Paul; some of us were able to attend a performance of the Alvin Ailey Dancers; many of us were provoked by the book *Cultural Literacy*; we all learned from each other in our classrooms.

I hope that your summer break is refreshing and relaxing and that you will return in the fall, eager to begin "interacting" again with educational ideas.

-Joy Stone

accepted body of communally shared information that must be acquired in order to function effectively in our literate national community, but I can't think we have to work toward absolute agreement on what that body of information consist of. Much of it we can agree on. It is the responsibility of our schools to find effective ways to teach this body of knowledge. And that involves, I believe, content-based instruction along with higher order processes for making that content meaningful. □

STUDYING CULTURAL LITERACY

Continued from Page 4

of what this literacy can provide in terms of acquisition of the American Dream.

When we looked at Hirsch's listing of what culturally literate Americans should know, and as a class, perceived there to be a gap between that knowledge with which we are familiar and that with which we aren't many of the emotions attached to loss, i.e., in this case, loss of stature, perhaps, began manifesting themselves.

At first many of us denied the importance of the items listed. Then for some there was resentment that our educations didn't provide this. For others, when we locked horns in debate, real anger emerged, with recognition as to what had been "done to us," in a sense. Later, for some, a leveling of affect appeared as we started to internalize our real teaching selves. And finally, as we started to draw significant implications from our reading and discussion, and focus on new perspectives and directions, there was a sense of acceptance and resolution, sparked by the hope that our new understandings were creating a wiser, more determined teaching self.

Simultaneously, some of these same stages of loss were made manifest as teachers considered not only them-

selves, but also how their students were being cheated of an opportunity for literacy. This perception made teachers resentful that they were being requested to have students devote so much time to skill and drill, and then these teachers became angry when they realized they had suppressed their own reservations about the wisdom of this policy. Hope was theirs when their regenerated teaching selves saw the promise of working with skill development in tandem with the learning of meaningful content.

I originally wanted to say more here, specifically about what I learned as an instructor of Curriculum and Teaching that could be shared with future THISTLE classes about curriculum development. It was to focus on the difference between intensive and extensive curriculum, and how best to utilize these concepts. But in my writing about the regeneration of the teaching self, I realize, much more than before, the significance of that experience for me as a participant/observer, and I'd like to end here so as not to diminish its importance. My thanks to those THISTLE teachers who participated in this course; our thanks, I'm sure to E.D. Hirsch, Jr., for his novel insights, which furrowed brows, raised voices, made us think, and when we left, there was a difference. □

WRITING AND PERSONAL GROWTH

Continued from page 6

The current group of THISTLE teachers includes teachers of grades one, two, and three. Again it is necessary to invent assignments and test their validity against the classroom experience of these able professionals.

While the content and skills to be taught in the early grades may differ, the teacher's attitude and mental dispositions need to be the same. And what are they?

- self-acceptance
- acceptance of others, exactly as they are
- understanding of our own needs
- understanding the needs of others
- inner quiet
- a desire to grow
- living in the moment
- a sense of adventure
- giving credit to others
- accepting credit

While this list applies to all of living, it has particular relevance for writing instruction. Who we are, fundamentally, always emerges through writing. Word choice, spelling, colloquialisms, punctuation, and syntax reveal us deeply, often unconsciously. Since even professional writers find themselves discovering news about themselves as

they write, we can be certain that younger writers will be revealing aspects of their experience through whatever they write, including math-writing. And this is why teachers must be conscious of how they respond to children's writing.

In a recent class, we modeled a situation with a teacher-student acting the role of a resistant fourth-grader. My job was to get him to write more than one sentence, his usual stopping point. He willingly wrote one original sentence on the board. I then asked him to choose any word in that sentence and start a new sentence with that word. He did so. Then I asked him to choose another word and start another new sentence with that word. While writing those two sentences, he added to the number of different words he had written, thereby opening up the number of new sentences that he could write using the method I offered.

Whatever he wrote, I accepted without judgment. Any comment or question about content or mechanics would have stopped his process and made me a critical co-author, a school figure to whom we all capitulated early. By supporting his process, I supported mine, and we both learned more about our craft.

So the course, the teachers, and their students evolve, as we learn and grow through writing and personal interaction, and through interaction with our own writing. □

CANONS TO THE RIGHT

Continued from Page 5

moral imperatives would seem to be the basis of instruction: "prejudices, strong prejudices, are visions about the way things are. They are divinations of the order of the whole of things."

While Bloom's discussion is limited to top American universities like his own University of Chicago, Hirsch is concerned with the public schools. Like Bloom, Hirsch is a foundationalist, attacking the "fragmented" curriculum of the 1960's and 1970's that elevated skills over content, cultural pluralism over unity. The school curriculum he argues, should be grounded in "traditional literate knowledge, the information, attitudes, and assumptions that literate Americans share.

Cultural literacy, in other words, can be understood as a set of key terms, a national vocabulary. Hirsch then makes the questionable pedagogical inference that teaching cultural literacy can be conducted as an exercise in vocabulary-building. Hence the infamous canonical List of names, quotations, terms and dates. If our students learn this vocabulary, he argues, they will be culturally literate.

If this recommendation for reform conjures up visions of a nineteenth-century classroom presided over by a Grandgrind whose students spend hours memorizing facts without contextualizing them, then it's not surprising that Hirsch should praise McGuffey's *Reader* and defend memorization as a pedagogical method. Nor should it come as a surprise, given the conservatism of his methodology, to find him attacking bilingual education and describing American primary political documents as the "sacred texts" of our "civil religion."

There is a proselytizing tone in Hirsch's book. Two years ago when the Institute invited him to Montclair State

College, he said that he wanted to be introduced as a person who has had three conversion experiences — from literary criticism to critical theory (*Validity in Interpretation*), then to writing theory (*The Philosophy of Composition*), and now to cultural literacy. So it's not surprising to hear something of the zeal of the recently converted when he writes that his reform "will bring us closer to the Ciceronian ideal of universal public discourse ..., achieving fundamental goals of the Founders at the birth of the republic."

So why are Bloom and Hirsch so popular? The answer is two-fold.

From the publication of *A Nation at Risk* in 1983 to the recent Ravitch and Finn book *What Do Our 17-Year-Olds Know?*, the evidence mounts that our students are embarrassingly underprepared and that we ourselves are partly to blame. Ravitch and Finn, for example, found that what 17-year-olds know most comes from the popular culture; what they know least, from the schools.

Secondly, in an atmosphere of public loss of confidence, be it political or education, there is a tendency to retreat from the complexities of the present to the imagined simplicities of the past. Hirsch's recommendation, particularly, is not merely an educational quick fix or bureaucrat's dream. It appeals to a fundamentalist spirit that is abroad in the country - a spirit that responds to crisis by searching for the simple authority and certainty of a canon.

The crisis is real. As educators in the humanities we have to respond to it — not through "civil religion," not through canons or Lists, and certainly not through a national cultural literacy examination. We must give our students a literate foundation while we instill in them a spirit of critical inquiry and challenge that constitutes the true legacy of the humanities, a sense of cultural pluralism that describes our world as it really is, and a tolerance that distinguished the informed and truly open mind. □


From Stephen Toulmin's *Human Understanding*

Each of us thinks our own thoughts; our concepts we share with our fellow men. . . We acquire our grasp of language and conceptual thought, then, in the course of education and development; and the particular sets of concepts we pick up reflect forms of life and thought, understanding and expression current in our society. . . Our personal beliefs find expressions only through the use of communal concepts. The new moulds in which our individual thoughts are cast acquire a definite form only when they become—at any rate, potentially—the collective intellectual instruments of an appropriate community.

Rationality is an attribute, not of logical or conceptual systems as such, but of the human activities or enterprises of which particular sets of concepts are the temporary cross-sections, specifically, of the procedures by which the concepts, judgments, and formal systems currently accepted in those enterprises are criticized and changed.

Comments? A later issue of the THISTLER will be devoted to a discussion of these and related claims!

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These Newark teachers have recently completed the 18 credits required by Project THISTLE.



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February 23, 1989

**Ms. Meredith Ludwig, Director
Office of Association Research
American Association of State Colleges and Universities
One Dupont Circle
Suite 700
Washington, DC 20036-1192**

Dear Ms Ludwig:

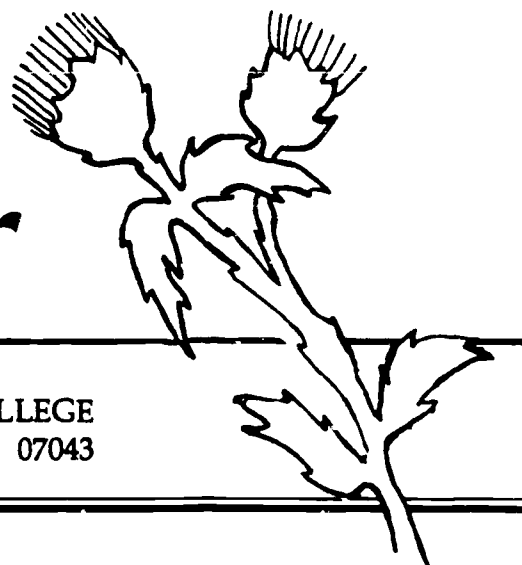
I am delighted to include information on Project THISTLE: Thinking Skills in Teaching and Learning for inclusion in AASCU/ERIC's Model Program Inventory Project. I enclose Part A, Part B and a collection of material from the Project. Please feel free to contact me if there are any questions. We appreciate the opportunity.

Sincerely,

**Wendy Oxman
Director
Institute for Critical Thinking and
Project THISTLE**

c: Dr. Gregory Walters, VPAA

The Thistler



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Number 2

WINTER 1988

MONTCLAIR STATE COLLEGE
UPPER MONTCLAIR, NJ 07043

The Thistler is a newsletter sponsored by Project THISTLE: Thinking Skills in Teaching and Learning. Since 1980, Project THISTLE has engaged Newark teachers in graduate coursework and other curriculum and staff development activities designed to improve students' chances for success in college. The support of the Victoria Foundation, Prudential Foundation, the New Jersey Board of Higher Education and Montclair State College are gratefully acknowledged.

THE THORP GAME: AN OVERVIEW

The THORP Game was designed to illustrate the principle that, given the same material resources, schools prepare children differentially for positions in society. In one school setting, an atmosphere of inquiry is established. Questions are asked by students and teachers, the focus is on the meaningfulness of what is learned, and cooperative group work results in enhanced achievement. In the other school setting, the same materials are used, but inquiry is discouraged, rote performance is rewarded and students do not engage in activities through which they learn from each other. Time is used inefficiently, and potential occasions for developing meaning and leadership ability are disregarded.

The THORP Game engages participants in one or the

other of these two school settings, and then places them in competition with one another for positions in a hierarchical division of labor. Although superficially the two schools have taught the same content using the same resources, participants' performance on the CAREER DECISION PLAN demonstrate that, in fact, the school which emphasizes thinking rather than rote memorization has more effectively taught the skills necessary for attaining the higher occupational levels. Work performance subsequently demonstrates that the "better" school's emphasis on inquiry has also taught the skills needed to perform at the decision-making level, while the other school has quite successfully prepared its graduates for the routine and monotony of unchallenging and repetitious work.

THE THORP GAME: BACKGROUND AND USES

Mary E. Bredemeier, Ed.D.
Guest Editor

Introduction

I am delighted to have this opportunity, as guest editor, to introduce THISTLER readers to an excellent tool for teaching and learning. It is THE THORP Game, designed by Dr. Wendy Oxman, Director of Project THISTLE, and now Director of Montclair State College's new Institute for Critical Thinking.

THORP (Thinkers or Parrots) is a simulation activity which illustrates the principle that, even with the same

material resources, schools tend to prepare children differently for positions in society, depending upon their socioeconomic backgrounds.

What is "simulated" is the difference in the experiences students have with "thinking skills" and "rote learning" approaches to administering the same basic curriculum. Participants have actual experiences in one of two school settings. In one school (Thobbin Academy), an atmosphere of inquiry is fostered: students and teachers ask questions, cooperative group work is fostered, and the focus is on the meaningfulness of what is learned. In the second school setting (Thuzzer Prep), the same materials are used, but inquiry is discouraged, rote

(Bredemeier, continued on page 2)

COORDINATORS COLUMN

We warmly welcome the 50 new participants to Project THISTLE: Thinking Skills in Teaching and Learning. The number of applications submitted to us this year was so large, and so many of the applicants are so interested in learning about using thinking skills to enhance curriculum development, that we have included an additional section. We are also gratified by the interest and support Newark teachers and administrators continue to give us.

Those readers affiliated with Project THISTLE for more than a year are probably familiar with Thobbin Academy, Thuzzer Prep and making dorries. You may have participated in the THORP game, a simulation activity, in one of our classes, or as part of an inservice program at your school. The current issue of THE THISTLER is devoted to the THORP game. Wendy Oxman, Director of Project THISTLE, developed the game. Mary Bredemeier helped her shape it into its existing format. Their articles provide us with an understanding of the rationale for the THORP game. Also included are reactions of faculty and students who have participated in the game.

As always, we welcome your comments and suggestions.

Joy Stone

(Bredemeier, continued from page 1)
performance is rewarded, and students do not engage in activities through which they learn from each other. Time is used inefficiently and potential occasions for developing meaning are disregarded.

After their "education" is completed, participants compete with one another for positions in a hierarchical division of labor. The outcome illustrates the advantages of schooling which promotes reflective thinking. A third phase of the game examines the relationship of leadership abilities developed in "school" to organizational productivity. The "debriefing," or post-game discussion, provokes lively sharing of experiences and thoughts about the real meaning of "educational equity" and how to achieve it, as well as the personal and educational factors involved in effective organizational leadership.

The THORP Game has special relevance for teachers in urban schools where traditional stereotypes may have promoted the notion (deplored and disproven by Project THISTLE teachers and other successful urban teachers) that economically disadvantaged youngsters "can't think." It thus serves as a dramatic reminder of the self-fulfilling prophecy effects of low expectations and demands

1980's and to introduce it nationally through the North American Simulation and Gaming Association (NASAGA). We have now run it in a variety of settings, including five annual meetings of NASAGA: Rutgers University, 1983; University of Iowa, 1984; Indiana University, 1985; University of Michigan, 1986; and Champlain College/Bishops University, Lennoxville, Canada, 1987. It has been published, and is disseminated nationally, by the NASAGA National Headquarters, University of North Carolina in Asheville, N.C. We have used it in graduate classes at MSC, in THISTLE classes and programs, and for faculty inservice programs in our work with the Barringer Cluster schools.

For this issue of the THISTLER, we have Dr. Oxman's own description of the basic purposes and design of the game. We include a review of THORP which appeared in the December, 1984, issue of *Simulation and Games* (the journal of theory and research in simulation-gaming), written by Dr. Timothy Erickson from Project EQUALS at the University of California, Berkeley.

We have used THORP frequently this year in the THISTLE classes and for inservice workshops as part of our collaboration with Barringer Cluster schools. From this perspective, we offer some reflections by MSC's Dr. Wandalyn Enix, Mrs. Muriel Lovell, principal of the Dr. E. Alma Flagg School, and by Ms. Elizabeth Jefferson, Ms. Princess Towe, and Mr. Robert Davis, Newark teachers and THORP Game leaders.

For my own contribution to this issue of the THISTLER, I have excerpted some selected passages from my graduate students' reaction papers, written after playing and discussing the game. □

MONTCLAIR STATE COLLEGE
SCHOOL OF PROFESSIONAL STUDIES
Nicholas M. Michelli, *Dean*

PROJECT THISTLE: THINKING SKILLS
IN TEACHING AND LEARNING
Wendy Oxman, *Director*
Joy Stone, *Coordinator*

The Thistler
Mary E. Bredemeier, *Guest Editor*

Please send your comments to the office of:
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A PRINCIPAL'S REACTIONS TO THE THORP GAME

Ms. Muriel Lovell, Principal
Dr. E. Alma Flagg School
Newark, N.J.

The importance of critical thinking skills in the instructional program was made quite explicitly to teachers at E. Alma Flagg School as they participated in the THORP Game, at their November 19, 1987 inservice workshop. The THORP Game, a simulation activity which involved direct teacher participation, provided an opportunity for participants to actually experience the motivational advantage of a "thinking skills" approach to learning.

The simulation activity was directed by Dr. Wandalyn Enix, of Montclair State College, Department of Curriculum and Teaching. The teaching strategies employed in the activity demonstrated the relationship between instructional practices and student achievement. The outcomes of the activity made teachers more acutely aware of how critical thinking skills combined with interesting and challenging activities can motivate student achievement.

An analysis of the activity also highlighted the importance of teacher attitudes and how certain teacher behaviors impact upon student achievement.

The workshop is one of several workshops designed by the Montclair State Barringer Cluster Collaboration.

The Administration and faculty wish to thank Dr. Mary E. Bredemeier for the continuing assistance and support of our staff development effort. □

THE THORP GAME: A REAL GIANT IN TEACHING AND LEARNING

Wandalyn Enix, Ed.D., Assistant Professor
Department of Curriculum and Teaching

The training of teachers is one of the most challenging and difficult tasks in the world of higher education. As a teacher educator, I am always looking for effective training techniques for both preservice and inservice teachers. One of my goals is to help train teachers so that they have positive attitudes towards lower socioeconomic students and students who belong to racial minorities. The first step in this process is to help teachers identify their own attitudes, perceptions, and behaviors. The second step is to provide diverse experiences for the teachers through films, literature, multimedia materials, cross-cultural interactions, simulations, and factual lectures. The third step is to have teachers examine their curricula to see that both content and implementation are free of prejudicial leanings.

My first acquaintance with the THORP Game was as a participant under the direction of Princess Towe and Bob Davis. My more recent experience with the game was as Director of the game for the faculty at the E. Alma Flagg School in Newark. Student teacher, Denise Pitts, served as my Assistant Director. The THORP Game has excited me about the several possibilities that it offers teachers to help them gain insight into social class structure in America. It offers some excellent explanations as to how education determines who gets what in this society, why they keep it, and why those who have little education tend to remain in the same condition generation after generation.

Schooling is a powerful force in this country, having many political, economic, and social ramifications, and because the teacher is at the helm of this force, I see THORP as having a tremendous potential to help them understand why it is so very important that they develop and foster democratic attitudes and values in the classroom. I see the THORP game as being one of the most important simulations that could impress upon teachers the need to focus on thinking skills and cooperative learning methodologies.

The changing of teacher attitudes and behaviors is a tremendous task. Very little work has been done on effective techniques that can be used to change teachers' attitudes and behaviors toward lower socioeconomic students and students of minority backgrounds. This I perceive as one of the major difficulties in elementary and secondary public education in urban America today. I would propose that diverse experiences such as the experience of THORP should be used periodically with preservice and inservice teachers. Teachers can then go through the "debriefing" phase of the game and compare current responses with previous responses.

The teachers at the E. Alma Flagg School were very insightful after the THORP experience. One teacher told me, "My son goes to a school just like the one your assistant conducted;" (Thuzzer Prep, where rote memorization and neatness were emphasized at the expense of thinking and cooperative learning) "he has a very difficult time in school." Another teacher said "It makes you stop and think just how do you run your classroom." All teachers were positively receptive and enjoyed the experience.

To focus only on the attainment of facts and rote memorizations for both students and teachers is an expensive educational mistake. Teachers and teacher educators must come to see the value of thinking and cooperative learning and the relationships between social class and knowledge. The THORP Game provides an excellent opportunity as a springboard for discussion. □

THE THORP GAME: CRITICAL INQUIRY AND EDUCATIONAL PRACTICE

Wendy Oxman

The THORP Game had its origins within Project THISTLE: Thinking Skills in Teaching and Learning, and was designed as a simulation to help teachers experience the effects of different kinds of school settings on children. The THORP Game is about critical inquiry - about the effects of thoughtful reflection about education. It deals with teachers' unexamined assumptions about themselves and their students, about the purposes of schooling, and about the nature of knowledge itself that underlie familiar, traditional educational practices that may put some students at a disadvantage.

Schools are essentially conservative institutions; that is, they are meant to mirror and to transmit to youngsters what is known of our physical, social, and cultural worlds. In carrying out this function of the school, teachers share with students traditional knowledge and skills. Schools also tend to perpetuate traditional ideas about knowledge and traditional ways of learning, despite the fact that rapid social and technological change has not only created new knowledge, but the need for students to learn new ways of relating to knowledge. To participate meaningfully in a technologically complex society, students need to learn to understand the processes they are using in acquiring new knowledge and ways of finding, organizing, transforming, utilizing and evaluating that knowledge. They need to learn to inquire - to question, to challenge, to suggest, to initiate. And they need to learn to coordinate their knowledge and skills with those of others in working toward a group goal.

Traditional knowledge and skills tend to be conscientiously updated when needed, such as when knowledge about non-Western societies, and skill in using computers, are added to the curriculum. However, the kinds of pressures that force additions to the explicit content of the curriculum are rarely applied to ideas about knowledge and about learning that affect teachers' decisions about classroom processes. Needed changes are seldom introduced in a way that transforms educational traditions in such a way as to overcome the generally conservative ethos of the school.

In schools relatively free from social, economic, and professional problems, there is likely to be the time and the perspective to review traditional practices, explore new ideas, and plan changes to help student relate in different ways to learning. In these schools, there is typically less mobility and absenteeism, fewer bureaucratic directives, higher levels of basic skills, lower levels of student frustration and alienation, and greater support for professional development and initiative on the

(Oxman, continued on page 8)

PARTICIPANT REACTION TO THE THORP GAME

Elizabeth Baker Jefferson
Teacher/Librarian, Barringer Preparatory School

The purpose of the Thorp Game is to illustrate "viscerally" the principle that schools prepare children to assume different positions in society. In less than an hour, participants discover that in one school setting, students are encouraged to focus on why something is being taught, to be creative and to work cooperatively; in the other, rote performance is rewarded and cooperation and inquiry are discouraged. In the next phase of the game, participants must depend upon the education they have received for their ability to compete, disguised as "decision-making." Usually, students from the school in which thinking was emphasized, rather than rote memorization, end up in management; students from the other school become (well-trained!) workers.

The nuances of individuality and interaction make the game continually fascinating for me, as facilitator and as observer. All the people who participate have already been successful in their academic endeavors. They are in college or have graduated from college. They have developed good images of themselves as students and teachers. Yet, invariably, the randomly selected group coming from the rigid, rote-memorization class, Thuzzer Prep, develop a look of suppressed anger, resentment, and tension. The other group usually is relaxed and communicative. The latter group is able to focus on the meaning of the "decision-making" directions, and assume management roles, while the rote-memorization group appears confused and passive, in addition to resentful.

Participants reported, "I felt like a child must feel in some classrooms," "It made me think." "The game served as an opportunity to rethink how we treat others and how our actions affect us. It served as a reminder that our behavior is crucial to students who often come in as "Thuzzer people" from home." "Good, practical experience, very close to real life situations." "As teachers we were made aware of how children would feel in our classrooms conducted in this atmosphere." The overall reaction of participants to the Thorp game was "Awesome."

My reaction to this simulation game was to affirm again the need we all have for an environment in which we are encouraged to learn and grow by developing and using our ability to think, create, and work cooperatively with each other. □

RUNNING THE THORP GAME

Princess Towe and Robert Davis,
Malcolm X Shabazz High School

Over the past several years, we have conducted the THORP Game for groups ranging in size from under twenty to over seventy participants. These groups have included elementary and secondary school faculties as well as graduate and undergraduate college classes. As a reflection of real life, the THORP Game mirrors attitudes and behaviors we find in our own students on a daily basis. When students can experience what they are learning, they learn it more thoroughly. We have found this to be true among the "students" playing the Thorp Game; typically teachers and other school personnel participating in Thorp as part of an in-service workshop program.

While the outcomes of the Thorp Game are usually predictable, it's never played quite the same way twice, and we never know quite what to expect. The differences among groups of teachers can be startling, and observing the dynamics of each group is fascinating.

In the Thorp Game, "students" are taught by two "teachers" in two different "schools." Although the content is the same, the approaches are distinctly different. In Thobbin Academy, a positive tone is set, and the "students" generally respond enthusiastically. They are led through an active process of inquiry to understand the meaning and the applicability of what they learn. Even though some Thobbins might be among the initially reluctant students, they come around and become actively involved. Unlike Thobbin Academy, Thuzzer Prep is distinctly authoritarian. Students are directed to complete various rote exercises without being told the purpose of or the reasons for the lessons. They become frustrated because they are not allowed to question the authority of the teacher and must complete what seem to be meaningless tasks. During the debriefing portion of the game, participants explore the relationship between these different types of educational experiences and individual success or failure in later life. Since Thorp is an outgrowth of Project THISTLE: Thinking Skills in Teaching and Learning, it's not hard to guess that the game is "rigged" to demonstrate that those who are encouraged to think in school will do better in the job market than those who are not. And it usually works that way. Usually.

The Thorp Game is typically run as an in-service workshop for teachers and other school personnel in a single school. When we present the game to a school faculty, the initial reactions of the teachers can range

from amusement, to bemusement, to boredom, to reluctance to participate.

Often, interesting differences among schools emerge. Some groups of teachers participating in the Thorp Game seem to have had a great deal of prior experience interacting and communicating with each other within their schools; these teachers always seem to enjoy the experience and have little difficulty playing the various roles the game calls for. When the principal joins in, the faculty members typically mirror his or her willingness.

On the other hand, teachers who have apparently experienced little prior interaction and communication with each other within their schools pose a special challenge to the game leaders. As in real life, we often have a "student" who is reluctant to join in some class activity; the "I-don't-want-to-do-this," or the "why-do-we-have-to-do-this" student! In most cases these attitudes are communicated through body language, though there have been instances where the attitudes were verbally expressed. In these situations, it is more difficult to involve them in the game.

Again, as in real life, through these groups we see our own real students at work. Our roles as facilitators mirror our real life roles as teachers. As classroom teachers, we are satisfied when our students can see the value in what we're teaching, and in Thorp, our most satisfying moments come when, during the debriefing phase, the teachers, like our students, begin to "see" the value and applicability of the insights gained in the Thorp Game. Mission accomplished!

What we have also come to realize is that as facilitators, we are modeling not only teaching methods, but in a way we are modeling ways in which faculty members are treated by administrators. In those cases where staff and administrators communicate as peers, and where there is free exchange of ideas, new ideas are welcomed — even if no one knows what those ideas are at first. On the other hand, where there are barriers and walls between staff and administration (and among staff members themselves), new ideas face a hard time becoming accepted.

Thorp demonstrated the continuing need for improved communication both in and out of the classroom. Just as it reminds us of the need to encourage thinking and communication in our classrooms, it should also remind us of the same need in the rest of our professional lives. □

THE THORP GAME: GRADUATE STUDENTS SPEAK

Mary E. Bredemeier, Ed.D.

Forward

One of the objectives of a graduate course I have taught for many years ("Social Class and Education") is to show how students' social class and ethnic backgrounds often affect teachers' perceptions and expectations as they decide what and how to teach. Of course we explore also the relationship between students' educational achievement and their subsequent occupational statuses.

Research documenting the thesis that teachers' expectations influence student achievement and are influenced by students' backgrounds is part of the required reading in this course. However, I have found The THORP Game an invaluable tool for giving experiential meaning to this ubiquitous phenomenon. Of course we have all experienced teachers who stimulate and encourage our reflection and creativity as well as those who stifle it, but the passage of years desensitizes us to the effects; we need to be reminded of how it feels, and how it affects us, to be the recipient of those quite different treatments.

Even before THORP was created, I had become aware of the value of simulation-gaming as an instructional tool for generating thoughtful exchange of ideas. Partly this is because the dynamics of good simulation games quickly captivate and engage students, from kindergarten through graduate school; time passes quickly, and students usually want to go on playing. It is in the post-game discussion, however, that students enthusiastically draw connections between the ideas, concepts, and theories they have learned in class and their real-life and game experiences.

The reaction paper is a useful assignment to supplement, expand, and reinforce the learnings derived from the game experience and debriefing. The excerpts which follow come from selected reaction papers to THORP over a number of years, and illustrate the impact of the game in furthering the goals of my course.

Graduate Students Speak: Some Perceptions of Purpose and Meaning

—“If I have adequately comprehended the intent and purpose for which THE THORP GAME was designed, it demonstrates the inferior results of rote learning as compared with the superior method of encouraging individual thinking, reasoning, and application. The students of Thuzzer Prep were simply directed to make dorries, with an instructional methodology based on imitation and repetition; the educational objective was to teach them to copy and obey. By contrast, Thobbin Academy students learned not only how to make dor-

ries, but the significance of correct dorrie order and the application of the principle in the determination of sequence. It is not surprising, then, that Thobbin students fared better on the 'Career Decision Plan' than Thuzzer students, even though the former may not have been consciously aware that they were using 'dorrie order' knowledge in their performance of the exercise.”

—“The purpose of THORP is to show how two teachers (or schools) can, with the same curriculum, have quite different outcomes. The students in the 'lower class' school learn simple tasks by rote, while the 'executive elite' are taught to think! As it is with the Thuzzers (lower class) and Thobbins (uppers), so it is within many of our schools across the country!”

—“After playing the game and thinking about the two different schools, I realized how much a teacher can influence the lives of her students. This was a meaningful experience that I never will forget.”

—“This game is a microcosm of our society today, where the more educated and well-trained the person, the higher status and more demanding a job he or she will acquire. Our task as educators is to try to distribute the opportunities more equitably, to give those who start with disadvantages more of a chance, rather than adding obstacles to their paths.”

—“The Thobbin Academy students did, indeed, capture the executive and managerial jobs in THORP-land, and the Thuzzer Prep students became their workers. What a parallel to the real world!”

—“The last part of the game concerned the organization and running of competitive businesses. The actual experiences here sensitized the class further to the advantages of a 'thinking skills' curriculum in giving people the chance to achieve higher occupational statuses, and in helping them succeed when they get there. It also gave us first-hand experience with the frustration and monotony that workers must tolerate in a repetitive, routine job, as well as the tensions and pressures experienced by those in managerial and executive positions. And last, but not least, it showed that personality and leadership style matter too; the executives and managers of both companies had graduated from Thobbin Academy, but one group did much better than the other because they remembered to apply the leadership principles which their teachers had demonstrated!”

—“One of the purposes of this game is to show the key elements which make for productivity within a company or corporation. We saw what was involved in each type of work role from assembly-line worker to manager to executive, and how they were interdependent. We also saw the incredible differences in productivity which occurred under different styles of leadership.”

(Bredemeier, continued on page 7)

(Bredemeier, continued from page 6)

—"The third part of the game allows one to experience the complexities, and sometimes the monotony, of the work world. Management people are faced with the problem of hiring the work force, supplying materials, organizing the workers for effective production, paying salaries, etc. The workers face the tedium of producing THORPs, an activity that becomes very boring in a short time. It also shows how resentment can build up in a factory worker or laborer whose steady and persistent work doesn't pay off, and who realizes the impossibility of ending up with much more than he or she started with."

How the Game Looked to Thuzzer Prep Graduates

—"I know now that both Thuzzer Prep and Thobbin Academy were learning about the same thing - dorrries. We had the same materials - handbooks, pencils, paper, and blocks - on down the line. Yet the Thuzzer teacher's approach was so shallow - no explanation of any possible significance for potential future use - nothing! Even when we raised questions, we were discouraged. What we were doing seemed pointless! We were just given the materials and a lot of rote activities . . . Then came the career choice. I'll admit that, when we did that portion, I felt incredible frustration, and even embarrassment, at not being able to do it rapidly; and I earned myself a lowly worker's position in the job market."

—"Our teacher was more interested in having us learn the 'hidden curriculum' than anything else. We were being trained to be workers, not leaders or managers. We were taught by rote, did copy work, and couldn't get our questions answered, so we stopped asking them. No wonder that, after we graduated from Thuzzer and took our competency exam, most of us ended up as workers! I wanted to be an executive, but it wasn't until the debriefing that I understood the educational advantages the Thobbins had which gave them the top jobs. They had been taught to think!"

—"Being a Thuzzer Prepper caused me to reflect on my own elementary and secondary school years. I realized that I had quite a few teachers from the 'Thuzzer Prep' school of learning, and that I learned far less from them than from the others. Even in college, some professors *told* us to be creative, but did not teach us how, or even allow it. I wish I could tell them all now how much I resent their robbing me of learning! On the other hand, I am thankful that the majority of my teachers loved learning and provided me with good role models."

How the Game Looked to Thobbin Academy Graduates

—"At Thobbin Academy, we had a 'thinking skills'

curriculum. We learned dorrie order and how to use it in sequencing. The most important thing we learned, though, was the importance of examining the *whys* of things. Our teacher told us we were smart, praised us for asking good questions, encouraged us to be creative, and taught us to be divergent, rather than convergent, thinkers!"

—"I loved this game! Of course, I was lucky enough to be a Thobbin Academy student, and we enjoyed our class. But mainly what I liked was the incredible parallels I saw in our discussion afterward between what we had been discussing all semester and the experiences of the game."

—"I was a graduate of Thobbin Academy, and I finished the Career Decision Plan first! This made me a business executive in the division of labor. I thoroughly enjoyed the challenge of figuring out how to make THORPs and to motivate my workers to be productive."

—"I went to Thobbin Academy and got a management job. I noticed that one Thuzzer graduate also got a management job. This corresponds to the reality that sometimes a very bright person with a poor education, who is in the right place at the right time, can break through the mold of the system and capture a prestigious position."

Perceptions of Who Can Benefit, and Why

—"THE THORP GAME is extremely beneficial to teachers, but it can also be useful to even elementary school students. This would be a good way of showing the students the importance of learning to *think* about what they are being taught, and to *ask questions* about their work, rather than just memorize it.

—"I think The THORP Game can be used in junior and senior high school. In junior high, students begin to be exposed to various occupational clusters. This game allows them, and senior high students, to experience a hands-on approach to the world of work and to the roles of boss, management, and worker. They can experience the frustrations of management, the tedious routine and ritualism of the assembly line, and the organizational difficulties of the top brass. It is a good career education tool."

—"The THORP Game is extremely valuable to students preparing to be teachers. We have been discussing how teachers should teach 'thinking skills' rather than just rote learning. Just talking about this is useful, but it doesn't have the same impact as feeling the differences the way we did in the game.

—"This is a good game for all adults who have input into our educational system: teachers, Board of Ed members, parents, administrators, and even company executives, who might be in a position to initiate and support change." □

(Oxman, continued from page 4)

part of the faculty. In other settings, the immediate need to bring students up to minimal levels in terms of traditional knowledge and skills and to compensate for the harsh realities of the students' out-of-school experiences make it hard to even recognize the need for a critical reconceptualization of schooling as it currently exists. Yet it is in these schools that the need is greatest.

Jean Anyon's report of educational inequality, *Social Class and School Knowledge* (1981) inspired the construction of the THORP Game. Anyon based her analysis on critical theory. Critical theory exposes contradictions between the stated democratic ideals of American society and its institutions, including humanitarianism and equal opportunity, and its actual practices. Anyon hypothesized that among these contradictions are social class differences in schooling embedded within the unexamined practices of the schools - the "hidden curriculum," that contradict the availability of generally similar books, curriculum guides, and other material resources that seem to signal equal opportunity.

Anyon visited elementary schools in communities in New Jersey differentiated by social class. She reported evidence to the effect that the education experienced by students in the different schools vary in fundamentally important ways, despite similar material resources. She found that in the working class school, the emphasis in classrooms was on mechanical behaviors, as opposed to "sustained conception," - reflective thinking.

Students were taught respect for authority, and given routine "busy work." In one example, Anyon reported that teachers had selected textbooks well above the comprehension level of students. This selection decision then served to confirm the teachers' pre-conceived expectation that the students were incapable of understanding, and thus justified the educationally worthless, but apparently purposeful, practice of "learning" by copying from the book. In more affluent schools, she found teachers emphasizing creativity and personal development, "thinking for themselves," "making sense of their experience," and "immersion in ideas."

Anyon concluded that schools indeed perpetuate some basic contradictions in American society: equal opportunities and preparation for those opportunities that are superficially equal but essentially and unjustifiably different and unequal. She suggested that working class children, through their experiences in school, are prepared for adult roles doing routine work directed by others, while more affluent children prepare for professional and managerial work requiring initiative, creativity, conceptualization, and autonomy.

How might we illustrate Anyon's description of her research in such a way as to raise the consciousness of

teachers to these different realities experienced by children? How might we arouse teachers to pose their own critical questions and to involve themselves, and thus their students, in transforming teaching and learning so as to reach - rather than contradict - the ideals of American Society?

These were the problems inspiring the initial development of the THORP Game to illustrate Anyon's research and to relate it to the principles underlying Project THISTLE: Thinking Skills in Teaching and Learning.

A Special Note: Mary Bredemeier's support and help was the key to the development of the game into publishable form. It would not otherwise have happened.

And Another Note: Jean Anyon is a Professor of Education at Rutgers University, Newark. After the first few trial runs of the THORP game, we contacted Dr. Anyon, and Mary and I ran the THORP Game for her and one of her classes. She was most appreciative that we had developed this illustration of her work. Limited numbers of copies of Anyon's article (Anyon, J. (1981). Social class and school knowledge. *Curriculum Inquiry*. II:1,3-41.) are available upon request from the THISTLE office. Through Project THISTLE, too, arrangements can be made for runs of the THORP Game for in-service staff development sessions in Newark schools. □

THE THORP GAME: A REVIEW

Timothy E. Erickson, Ph.D.
University of California, Berkeley

Review of THE THORP GAME, reprinted from *Simulation and Games*, December 1984, pp. 493-497.

THE THORP GAME by Project THISTLE, 2-3 hours; 12-36 players. Manual and complete instructions from Dr. Wendy Oxman, Project THISTLE, Montclair State College, Upper Montclair, NJ 07043, (201) 893-5192. Available from NASAGA National Headquarters, UNC - Asheville; Asheville, N.C.

Inequity in education is a serious problem. Groups are distinguished by race, creed, or sex; the distinctions are manifested in school segregation, differential instruction in classrooms, and differential attention in the home. The result is always the same: the more privileged groups are prepared to take advantage of more options when they graduate from high school. These differences are not genetic. We are, in our educational practices, denying opportunities to deserving segments of our population.

(Erickson, continued on page 9)

(Erickson, continued from page 8)

The THORP Game incorporates much of the best of what simulation gaming has to offer. It addresses this serious problem to the right audience, it is ingenious and direct in its approach, it seems extensively play tested, and its materials are clear and easy to use. Most important, it is an *appropriate* use for simulation. It is hard to imagine a more effective medium for illuminating this issue.

Description of the Game

The game is played in three phases. First, players are high school students, getting the education they need to function in the game's work world. Next, they find jobs. Finally, their companies compete with one another in making the game's eponymous THORPs - small objects vital to the national economy of THORPLAND. . .

. . . Debriefing is, as usual, essential. The game manual gives a good and detailed guide to that process philosophically similar to the Stadskev (1974) EIAG model. Discussion progresses from a simple recounting of experiences to greater generalization. Ultimately the game is compared to the reality it simulates.

Commentary

There are many appealing aspects of the THORP Game. For me, the most interesting is how ingenious it is. Stratification occurs naturally and understandably. Furthermore, it is not a result of any artificial point system, but rather a result of *education*, which is exactly what we are studying. Congruency between the simulation and the subject is essential for the players to accept the model as useful; the THORP Game designers have, through ingenuity, kept their model closer to reality than most of us manage.

One result of this good design is that the simulation rings true in more ways than are made explicit in the manual. The manual would have us believe that there are really two observations players can make about the game: first, that educational stratification has significant social effects, and, second, that the level of cognitive skills attained in school strongly affects occupational attainment. The game goes far beyond that - intentionally, I'm sure - in its ability to serve as a forum for commentary on our educational system. Schooling at Thuzzer Prep is boring; at Thobbin Academy, it's fun. Management jobs are interesting; workers' jobs, in general, are not. On the other hand, managers suffer a lot of pressure, whereas the workers just follow instructions. Though players are not told that management jobs are more desirable, they usually choose them. If we are investigating pedagogy, we can easily see what kinds of teaching lead to inquiry and interest, and what kinds lead away from it. My favorite observation from the game, though, is this: **What we learn in school may help**

us get a job, but very little of it helps once we get there. It is perhaps the *spirit* of the schooling, more than anything else, that makes a THORP player resilient enough to survive the uncertainties of management or placid enough to endure a lifetime on the assembly line.

Although the designers point out that the game can be played by seventh graders, the game is most important for graduate students and practicing teachers. Two hours or so invested in this game would be a vital part of any preservice or inservice program.

There are only a few problems with the game. First, it cannot be played twice. Like other classic games, such as BaFa Ba Fa and Starpower, THORP depends on the ignorance of its participants. Another problem that might inhibit its widespread use in classrooms is that it *requires* two directors to run it - one to teach each of the two schools in the game. Combining two classes might make the game unwieldy. Another difficulty I had was the business of paying the workers. The economic system of the third phase did not seem to have much to do with the rest of the game; it was not associated with any other goals. Perhaps while the elite students are hearing about patriotism and the importance of THORPs to the national economy, their counterparts at Thuzzer Prep could be told that what's really important in life is to collect chips. On the other hand, maybe we could eliminate the chips altogether.

The benefits of the game far outweigh these few problems, however. It is easy to run, fun, and important. The messages of the game are clear, and the experiences of the players, both direct and vicarious, will help them all better understand the effects and mechanisms of educational inequity. □

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March 23, 1988 7 p.m.
Kops Lounge, Russ Hall
Montclair State College

Knowledge as Design: A Workshop on Critical Inquiry

Project Thistle teachers are invited to join
Montclair State College faculty in attending
a workshop by Dr. David Perkins,
Harvard Graduate School of Education



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THISTLE' helps teachers strengthen pupils' intellectual, creative abilities

Critical thinking project targets classroom preparation

By JANICE PHIPPS

Although TheodoreSizer, a prominent educator, states in a 1984 study that America doesn't believe poor kids, imaginatively taught, will respond to academic abstractions, it's happening every day in Newark classrooms.

"My kids are reading Macbeth this year," said Barringer Prep English teacher Willie Mae Wright-Gaulden. "The boys are required to send letters to the girls as if they were Lady Macbeth, complete with Old English phrases.

"They're not bored," she said. "They act as if the scenario is being played out right now. They're interested and enjoying Shakespeare."

Wright-Gaulden has taught in this city for 22 years and is one of 17 Newark teachers highlighted in a new book, "Urban Classroom Portraits: Teachers Who Make a Difference," written by Dr. Mary Bredemeier, professor emerita at Montclair State College.

The 17 teachers described in the book were a part of Project THISTLE (Thinking Skills in Teaching and Learn-

ing), a curriculum and staff development program at Montclair State designed to improve the basic skills of urban college-bound students by working with their teachers.

"The program's main emphasis is on the preparation of classroom teachers to strengthen their students' creative and critical thinking abilities" said the program director, Wendy Oxman-Michelli.

Her husband, Nicholas Michelli, is the dean of professional studies at Montclair. Together they founded the program in 1980.

"Critical thinking could be the most basic skill," he said.

Michelli said many of the teachers were exhibiting the behaviors they complained about in their students when they began the project.

"They complained: 'We don't understand; we've never had to do this before,'" he said. "I asked them who did they sound like. They had to laugh at how much they sounded like their students."

Wright-Gaulden described the program as a "renaissance for us!"

"The teachers from this school and many others we met who enrolled were veterans, having 10 years or more of experience.

"We learned that we were nearly all filled with frustration about our problems, especially the policies which governed us so strictly and which we didn't have anything to say about," said Wright-Gaulden.

When she enrolled in Project THISTLE, Inez Appling said she was getting discouraged and had begun to entertain ideas of leaving teaching. She joined primarily because she felt she needed "recharging." She believed she was losing the creativity which had characterized her early years of teaching (22 years at Seventh Avenue School and Barringer Prep).

Before THISTLE, Appling said she tried to be creative but remembers that much of what she did was explain formulas.

"I asked questions about what I said or what was in the book and tested them on that. A great portion of my questions concentrated on memorization of facts.

"Now I ask a lot more how and what—how to tell the difference and compare questions. I require them to figure something out for themselves about a chapter before I explain a thing about it," she said.

One situation cited in Bredemeier's book describes a student who just "didn't understand any of it" after an introduction to molecular bonding. The students were looking at a diagram which illustrated how elements bond to form molecules. Appling told the student: "That's not true. There are two things in that diagram that I know you understand. What are they?"

One student pointed out they knew that "H" was hydrogen and "C" was carbon.

"That's two of three things in the diagram," Appling said. "What's the third thing?"

"The lines," they responded.

"Well, when people, or objects, get bonded, what happens?" she queried, "they stick together. People get married, for instance.

"It's the same with electrons. The lines are symbols of electronic bonding."

Appling said she tries hard to "show them the relationship between education and life."

Bredemeier said one common characteristic of the teachers in her



Photo by Richard Raska

Wendy Oxman-Michelli, director of the critical thinking program at Montclair State College, explains Project THISTLE



Photo by Richard Rosenberg

Mary Bredemeier, author of 'Teachers Who Make a Difference,' second from left, discusses her book with participants in Project THISTLE at Barringer Prep. From left, are Willie Mae Wright-Gaulden, Elizabeth Jefferson, Ida Anderson and Inez Appling

book was their disposition to reject stereotypes and low expectations.

"These exceptional teachers search constantly for imaginative ways to develop students' curiosity and reflective thinking capacities," she said. "They don't neglect facts, though; they perceive facts as necessary means to ends, and not as ends in themselves. With teachers, as with students, when you tap motivation, you get results."

Initially, Bredemeier set out to document what teachers were doing in the classroom and what they considered to be THISTLE's effects on their perceptions and performance for an annual THISTLE report.

"You might say I got hooked on this project," Bredemeier quipped. "One day it dawned on me that if I added an introduction and a conclusion, I would have a book no one else had written—a 'teachers talk' type of book focusing on the much-neglected urban school. These are their stories."

When Bredemeier interviewed Barringer Prep English teacher Ida Anderson in 1983, she asked the veteran educator how she avoided "burnout."

"I like children," Anderson said. "They are my motivation!"

Last week, Anderson insisted her enthusiasm "hasn't changed."

"Every child comes to the classroom with something to offer," she said. "They are ready to learn. It's my job to facilitate that learning."

Anderson believes she has a simple formula which works with basic skills as well as higher-level classes

"The answers to who, what, when, where, why and which (the 6 Ws), plus how (the H), provide the 'decoding and interpretive key' for self-probing strategies students can apply in their reading and writing activities," she said.

Elizabeth Jefferson, the school librarian at Barringer Prep, has worked in Newark for 20 years. Bredemeier described her as an "extraordinary educator by any standards."

"She brings to her teaching and library work an intellect and store of knowledge which qualify her for college-level teaching.

"One of Liz's most durable school-wide contests is the 'Word of the Week' project," Bredemeier said.

"She was working on it the day I first visited her in Barringer Prep. It is a competition open to all students in the school and is designed to improve their vocabularies and SAT (Scholastic Aptitude Test) scores

"Students must define the word, use it correctly in a sentence and list as many other words as possible which can be created from the letters in it," she explained.

"The results," Bredemeier said, "have been startling. For example, one student generated 265 words out of 'catastrophe.' She went through the dictionary to do it, and I had to check on the unfamiliar words. It expanded my vocabulary."

Bredemeier summed up the THISTLE program simply when she said: "With teachers, as with students, when you tap motivation, you get results."

Project THISTLE is housed at Life Hall of Montclair State College, 893-5184. A participating teacher, if he or she qualifies for admission to a Montclair State graduate program, also has the opportunity to apply 18 free credits toward a master's degree.

Newark program stresses developing thinking skills

A program that will attempt to show teachers how to have students think for themselves, going beyond true-or-false exams, is being developed by the Newark public schools and the Montclair State College faculty.

The program, project THISTLE (Thinking Skills in Teaching and Learning), is an attempt to train teachers to develop their students' thinking skills, according to a spokesman for the program.

THISTLE stresses the idea that thinking skills cannot be developed through routine classroom exercises, said Dean Nicholas Michelli of Montclair State College's School of Professional Studies.

"You don't learn photography," he said, "until you first know there's more to it than snapping the shutter, until you want to become a good photographer and you're willing to try taking some pictures that might not turn out very

well."

Michelli said part of the program, therefore, involves helping teachers develop their students' self-confidence, "intellectual courage" and the willingness to make mistakes.

The program encourages teachers to use classroom exercises that stress the creative thinking process and that allow a give-and-take between students and teachers.

"Right-wrong answer teaching may be a good way to train robots," said Dr. Wendy Oxman, THISTLE's director. "Relying exclusively on it in the classroom surely is no way to get human beings beyond rote basic skills to human thinking."

The program, which has shown "extremely high morale and enthusiasm" on the part of Newark teachers, is being evaluated through standardized tests and classroom observation, a spokesman said.

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Teaching thinking skills

What are thinking skills and how do you help teachers teach them? Answers to these questions are being developed in Project THISTLE (Thinking Skills in Teaching and Learning), a program developed cooperatively by the faculty of Montclair State College and the Newark, N.J., public schools. Its aim is to strengthen teachers' abilities to help students develop their thinking skills.

The Project staff takes seriously the idea that the teaching of thinking requires far more than the typical passive classroom processes. Teachers must engage with their students in the intensely active mental process of coping with an intellectual problem. For the student, an indispensable aspect of learning, then, is the awareness of a perplexity, a puzzle. The strategies followed in Project THISTLE follow directly from this premise. First, teachers must be helped to develop and reconstruct their subject matter in such a way as to interest students in a challenging, puzzling, perplexing aspect of a mathematical process, a short story, a poem, a historical event or a writing assignment. Second, teachers must be helped to develop supportive but businesslike classroom atmospheres and structures that require students to work toward the resolution of the perplexities. It is through activities designed with these

features in mind that learning occurs.

Not until teachers and students understand that meaningful learning cannot occur through the completion of routine classroom exercises can thinking skills become the focus of classroom lessons. "You don't learn the skill of photography," say Dean Nicholas Michell of Montclair's School of Professional Studies, "until you first know there's more to it than snapping the shutter, until you want to become a good photographer and until you're willing to try taking some pictures that might not turn out very well." Part of the Project effort, accordingly, is to help teachers develop their students' self-confidence and "intellectual courage," the willingness to make mistakes.

With the stimulation of curiosity about subject matter and encouragement and support for learning the undergirding, it becomes possible to build on another of the fundamental premises of Project THISTLE: that responsibility for learning must be shared by students and teachers. The teacher's major responsibility is to bring important, fruitful and interesting problems to the attention of the students, to provide the necessary supportive atmosphere

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COORDINATOR'S COLUMN

This autumn marks the second half of year 7 of Project THISTLE and the affiliation of Montclair State College with the Newark Public School System. We have had seven groups of participants, and are looking forward to enrolling a THISTLE VIII group this January. Through *The Thistler* we are able to communicate with colleagues currently involved in the project, as well as with old friends. We invite you to participate. We welcome letters to the editor and original articles from current or former participants in the Project.

This is the second time that an entire issue of *The Thistler* is focused upon a single school. We asked faculty from Shabazz High School to share some of their thoughts about participation in Project THISTLE. The results of their thinking are printed in this issue. In addition, colleagues from MSC present the findings of a follow-up study conducted at Shabazz during the past year, and an assessment of the unique characteristics of graduates of Project THISTLE.

Joy Stone

LIFE AFTER THISTLE

by Princess B. Towe

On reflection and review of the last seven years, I am astounded by my professional and academic growth. Growth certainly can be measured in many ways. My participation in Project THISTLE has meant a constant evaluation of self and adjustment where necessary. Consequently, I am ever aware of my role relative to that of my students. Though I had some vague notion of this factor before THISTLE, after THISTLE my understanding is clearer and more focused. I realize that as a facilitator, my role is much more.

It is not simply giving facts and expecting students to regurgitate those facts. It is sharing ideas, collaborating and motivating. It is aiding students in internalizing material, assimilating it, and relating it to various other areas outside of the classroom. In this way, students are able "to see" the value in learning. Once they can make some sense of what they are learning and how that learning impacts on their lives, they are more likely to be motivated and engaged. Success, here, does not just happen. I have always engaged students in probing, reflective thought. However, my use of strategies in teaching for thinking has been refined as a result of Project THISTLE, thus affording me and my students a greater measure of success. Through THISTLE I gained valuable strategies and techniques that insure success when applied.

In addition to strengthening my instructional skills, Project THISTLE has aided in my professional growth and development. I have had many exciting opportunities to share my acquired knowledge and skills with college students (undergraduate and graduate), colleagues, and other professionals in the education arena. These opportunities have been some of the most rewarding experiences of my professional career. I have learned so much from so many. The continued support and networking of the THISTLE staff are invaluable.

Needless to say, I think THISTLE is a valued asset. Life before THISTLE had its good moments. But, there were too many frustrating ones. Life after THISTLE has afforded me renewed vigor, confidence, and reaffirmation that teaching is honorable, worthwhile, and dynamic. Perhaps my saying "Life after THISTLE" is a misnomer, because I do not suggest that THISTLE is dead, quite the contrary. For this educator, THISTLE is still very much alive and doing well.

THISTLE PARTICIPATION AND TEACHING IMPROVEMENT

John Palladino Ed.D., Assistant Professor
Department of Curriculum & Teaching

Introduction

Ten teachers at Malcolm X. Shabazz High School in Newark, along with three of their supervisors, agreed to participate in June, 1987 in a study to evaluate the impact of the THISTLE Program on one of its first graduating classes. Nine of the teachers were interviewed.

Results: Teachers

Teacher participants perceived that their participation in THISTLE resulted in positive change in their teaching, reporting either modifications or significant changes in teaching methods. The variety of modifications and changes reported by these teachers suggests that the Project provided an abundance of teaching strategies presented in ways that facilitated transfer. The modifications or changes that were cited by more than one teacher appear to overlap the two major thrusts of the Project, planning and teaching. The focus on planning is illustrated by the emphasis on setting realistic goals and objectives, and the ability to better develop questions to elicit thinking. The focus on teaching is illustrated by the emphasis on problem-solving, improved questioning techniques, and great emphasis on wait-time following teacher questions.

Those teachers who perceived that they had made significant changes were teachers who expressed how they were looking at their courses very differently. For example, a consumer math teacher had incorporated a great deal of vocabulary building and reading skills-building into her lessons. A social studies teacher switched from lecture to a more socratic method, going beyond basic recall and requiring greater application and synthesis. A third teacher now focused less on teacher talk and more on student activities.

The Project's emphasis on providing teachers with coursework, experiences, and supervision that would promote planning and teaching which would more greatly foster the development of student thinking skills appears to be realized by the significant number of teachers who reported that they were working with a great emphasis on thinking skills. The Project's impact on this thinking skills focus is supported by the number of teachers reporting that this focus was either a small or great change from the way they taught *prior* to their participation in the Project.

Also, the majority of teachers reported involvement in curriculum development activity, ranging from a single unit to course development, with particular focus on curriculum modification and adaptation.

Results: Supervisors

The perception of these teachers' supervisors was that change in teaching methods had taken place as a result of participation in THISTLE, with supervisors reporting modification or significant change in six of seven teachers. Also, all seven teachers were perceived as focusing on thinking skills in their instruction, either somewhat or a great deal.

Recommendations

As a result of interview and questionnaire analysis, the following recommendations emerged:

1. Supervisors should be provided with course content information as well as THISTLE procedural information in order to have them better function in support of THISTLE goals.
2. In order to develop a stronger scaffolding for learning and implementation of THISTLE principles, a greater focus on subject area content mastery, perhaps indicated by offering content area courses earlier in the THISTLE sequence.
3. The encouragement of the development of school building mechanism that would provide collegial recognition, support, cultivation and follow-up of THISTLE graduates' new skills and knowledge.
4. Greater attention paid to the development of participant loyalty not only to the expressed philosophy and principles of Project THISTLE, but also to its continued support, maintenance, and growth toward excellence.

Conclusions

The data suggest that teacher participation in Project THISTLE has resulted in positive teaching changes, especially with a thinking skills focus, and in greater involvement in curriculum development.

I would like to extend both my personal thanks and the thanks of the THISTLE staff to those teachers and supervisors who devoted the time to participate and make this significant research contribution.

MONTCLAIR STATE COLLEGE SCHOOL OF PROFESSIONAL STUDIES

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The Thistler

Princess Towe, Guest Editor Malcolm X. Shabazz

Please send your comments to the office of:
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THISTLE: COLLEGIALLY & CRITICAL THINKING

by Bob Davis

Education today is a complex, often confusing profession. Frequently that confusion comes from within. Teachers and administrators alike build walls, which prevent free communication of ideas. While we've come to accept, and even expect those walls between teachers and administrators, it's the walls between teachers that are the most damaging.

Among Thistle's most important aspects - to me at least - has been its ability to lessen the number of walls which have blocked the flow of ideas between us. Unfortunately, some of our early participants have for a variety of reasons, rebuilt those walls. Communication has again been stifled.

Some of us have continued to share ideas, and it's been especially effective when teachers in different disciplines share the same students. When we take the time to share our ideas, our techniques, and our perceptions of our students, we find ways to make their instruction more effective. It really does make a difference when a concept discussed in United State History is reinforced in English. It demonstrates to the student that ideas don't exist in isolation, and that they can be applied to a variety of situations. This realization helps the student to develop the critical thinking skills so necessary to success in higher education - and which THISTLE was developed to foster.

Our problem today is to find a way to keep that all-important sense of collegiality alive. This is increasingly difficult in an educational environment in which disagreement and confrontation are the norm. How do we convince the cynical, "burned-out" teachers among us that caring and sharing can make a difference, and that the students in their classrooms are capable of learning? How do we convince the administrators, central office personnel, and state bureaucracy that threats and confrontations don't develop a climate that foster communication?

How do we keep the THISTLE idea alive? We teach!

PROJECT THISTLE & MATHEMATICS

by Kathleen Witcher

Project THISTLE enabled me to write a Consumer Mathematics program for senior classes at my school. With the use of Bloom's Taxonomy, a workable curriculum was added to math courses for twelfth graders, not intending to go on to college from Malcolm X. Shabazz High School.

Students of this course are able to compute as well as apply and even evaluate various topics that affect consumers, including automobile insurance, financing purchases, and comparative shopping.

Whereas I once thought that I knew the techniques for teaching basic mathematics, participating in Project THISTLE allowed me to explore new realms of the education profession and it enhanced my teaching abilities greatly.

THISTLE & SCIENCE

by Wanda Davis

Upon entering the THISTLE program, I had mixed feelings. I was a newly hired and certified teacher who wasn't very confident of my teaching abilities, and I knew that I needed help. I got the most benefit I believe, from one of Dr. John Barrell's courses. In this course, Dr. Barrell showed us that through the use of concrete examples with which the students can relate, then we would make better contact with our students. I began to use the method that he utilized so well, and now I use it in my classes unconsciously. It's like second nature to me. When I see in my students' faces confusion or a note of "I don't understand," I say to myself, "let me see if they'll understand it if I explain it this way." My examples may seem far-out to some people, but when I see a head nod or that bright-eyed look, I know that I have reached my kids. I highly recommend this process to any and all teachers with a desire to reach their students on all levels.

The THISTLE Program offered many other strategies and techniques for the enhancement and ultimately the education of our students. It has made my approach to teaching much different and I hope that the difference is for the benefit of my students. I was skeptical of the effects of THISTLE, but I know now that the ideas that the program fosters, really work. More of today's educators should be exposed to developing thinking skills, so that tomorrow's populous will be more enterprising and self-sufficient.

THISTLE: TEACHING STUDENTS TO THINK

by Doris Wood McNeil

For me, teaching is a rewarding and motivating experience. The motivational aspect comes into being by embarking on new and realistic methods of teaching which involve students in the learning process. The rewarding aspect comes into being when learning has taken place.

With the help and guidance of THISTLE, I realized the necessity of teaching students how to think. Getting students beyond the knowledge level is very challenging and frustrating at times.

THISTLE made me feel better as an educator providing students a quality education. I've learned a little more patience and how to relate better to the students. Making learning relevant is important in all subject areas.

THISTLE TEACHERS: MAKING A DIFFERENCE

by Mary E. Bredemeier

I have followed Project THISTLE with great interest since it began in 1980. In 1982, I began writing a book about some of the teachers in the program, and finished it last year while on sabbatical. It is now in review by potential publishers.

Malcolm X. Shabazz High School is well-represented in *Urban Classroom: Portraits Teachers Who Make a Difference*. Except for the introductory and summary chapters, each of the 18 chapters presents a profile of a THISTLE teacher. The stories include my classroom observations and points of emphasis from my interview with the teacher and, sometimes, students. Shabazz teachers Princess Towe, Bob Davis, Dons Wood, McNeil, and Chet Oxford are among the seventeen teachers whose stories are told.

What do all seventeen teachers have in common?

The first thing is commitment to the idea fundamental to the THISTLE model, that *thinking is the most basic skill*. Another is the assumption that every student except possibly the severely retarded has the capacity to learn to think reflectively. A third is the belief that the indispensable first step in activating capacity is a meaningful *stimulus* to think. These teachers believe that, when you tap motivation, you get results. They consider it part of the teacher's job to *find* the puzzle, or perplexity, or challenge, that will start the thinking process and keep it going. This is not easy, of course; it is the *teacher's* primary puzzle, perplexity, or challenge.

I have seen them provide the necessary stimuli to elicit thinking in a variety of ways. Bob Davis places great emphasis on showing connections between the subject matter he teaches and students' real life experiences, and across subject matter fields. Princess Towe's

dynamic personality and masterful questioning skills stimulate lively speculation, controversy, and questioning. Chet Oxford does a fine job of showing students the positive learning value of error, and Dons McNeil skillfully challenges students to *think* about and with music.

These teachers told me that Project THISTLE gave them a great many ideas about how to escape the dreary "one-answer-is-right" pedagogy which so often encourages students to want to be *already right* rather than to *find out*. They learned from THISTLE how to show students that there often is no single answer to a thought-provoking question or correct solution to a complex issue, and that there is usually more than one way to resolve a problem. They regard facts as tools rather than ends in themselves, and encourage experimentation and risk-taking. They demonstrate their conviction that clear thinking is not an easy or simple matter by sharing their own perplexities with students.

As a corollary, they place great emphasis on questioning. Nearly every teacher I interviewed mentioned improvement in questioning skills as one of the major benefits they experienced from Project THISTLE. A second major emphasis was on their improved skill in making the classroom cooperative learning environment through team effort and peer teaching.

The overriding thing, though, was that Project THISTLE gave teachers the opportunity for sharing ideas, frustrations, and successes with their colleagues. This "networking" aspect of the program seems to provide an antidote to the isolation and lack of positive reinforcement teachers too often experience in their daily routines, and thus it enhances teacher morale and effort.

I am sold on the THISTLE model! I commend Shabazz for its high level of participation since the beginning, as well as for the contributions Shabazz teachers have made to the program's success.



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